UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/683,869	10/09/2003	Jack Hou	07783.0071.NPUS01	7895

7590 06/15/2006

Albert P. Halluin
Howrey Simon Arnold & White, LLP
Box 34
301 Ravenswood Avenue
Menlo Park, CA 94025

EXAMINER	
THOMAS, JAISON P	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/683,869	HOU ET AL.	
	Examiner	Art Unit	
	Jaison P. Thomas	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74* is/are pending in the application.

4a) Of the above claim(s) *See Continuation Sheet* is/are withdrawn from consideration.

5)☒ Claim(s) *6-10,28,29,52 and 53* is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/04 and 3/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 11-13,15,17,18,21-27,32,34,35,38-44,57,59,60,63-69 and 72-74.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species:

Group I: R group of Claim 11 where R is a fluorinated alkyl or fluorinated aryl.

Group II: R group of Claim 12 where R is a polymeric or oligomeric chain represented by the Formula (R).

Group III: R group of Claim 16 where R is a fluoropolyether.

The species are independent or distinct because inventions I-III are directed to related products. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, the products are significantly different in chemical makeup and therefore would have different resulting properties.

This application also contains claims directed to the following patentably distinct species:

Group IV: Formula T-1 of Claim 1

Group V: Formula T-2 of Claim 1

Group VI: Formula T-3 of Claim 1

Group VII: Formula T-4 of Claim 1

The species are independent or distinct because the inventions IV-VII are directed to related products. The related inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, the products are significantly different in chemical makeup and therefore would have different resulting properties.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claims 1-10, 28-30, 45-55, 70, 71 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the

requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

During a telephone conversation with Violet Kung on 4/20/2006 a provisional election was made with traverse to prosecute the species of Groups III and IV. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-13, 15, 17, 18, 21-27, 32, 34, 35, 38-44, 57, 59, 60, 63-69, 72-74 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non-elected species.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 1, 2, 14, 16, 19, 20, 30, 31, 33, 36, 37, 55, 56, 58, 61, 62, 70, 71 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 17, 18, 22, 27, 33, 34, 35, 46, 47, 48, 53, 54 of copending Application Nos. 10/976152 and 10/976244. Although the conflicting claims are not identical, they are not patentably distinct from each other because It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the disclosed compositions of the copending application to achieve the compositions of the instant Claims, the methods of adding the composition, and creating the electrophoretic displays using the composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 10 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is meant by "independently absent" in the second line of Claim 2. For purposes of examination, "independently absent" will be construed to mean "absent."

The use of trademarked names, as in instant Claim 10, in claim language is indefinite. See MPEP 2173.05(u).

It is unclear what is meant by "pyiridium salt" in line 2 of Claim 28. For purposes of examination "pyiridium salt" will be construed as "pyridinium salt" based on spellings in the other claims e.g. Claim 5,10, 29 etc.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 30 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Mashlyakovskiy et al. (Mashlyakovskiy et al., Fluoropolyethers End-capped by Polar Functional Groups. I. Kinetic Approach to the Reaction of Hydroxy-Terminated Fluoropolyethers with Cycloalyphatic andAromatic Diisocyanates, Journal of Polymer Science: Part A: Polymer Chemistry, Vol. 37, pp. 557-570 (1999)).

Mashlyakovskiy et al. discloses a fluorpolyether end-capped by a hydroxyl group (Abstract). The reference is anticipatory.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-5, 14, 16, 19, 20, 30, 31, 33, 36, 37, 45-50, 51, 54, 55, 56, 58, 61, 62, 70 and 71 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chiang (US Patent No. 4,285,801).

Chiang teaches a suspension for an electrophoretic display where the pigment particles in the suspension are coated with a "highly fluorinated polymeric material, which acts as a dispersant" (Abstract). Specific examples of the polymeric material that are disclosed include "highly fluorinated long-chain alkyl or alkyl aryl carboxylic acids, sulfonic acids and phosphoric acids, their esters and metal salts; high fluorinated long-chain alkyl or alkyl aryl alcohols; highly fluorinated A-B block copolymers of long-chain alkyl or alkyl aryl alcohol with ethylene glycol or propylene glycol; and highly fluorinated poly alkyl methacrylate and its copolymers" (Column 1, lines 63-68 thru Column 2, lines 1-6, see also Tables I, II and III). Further, disclosed in the examples of the invention, the fluorinated dispersants are used in amounts ranging from 1 to 3 mg per 50 mg of pigment particles (approximately 2 to 6% of pigment weight) in a Freon TF solvent (known in the art as 1,1,2 trichlorofluoroethane).

Applicant should note, in regards to Claims 70 and 71, the limitations to the microcup and microencapsulation methods are not given patentable weight. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

The reference is anticipatory.

In the alternative, Chiang is relied upon as discussed above, however, it does not teach the specific m and q values required by instant Claims 19 and 20, 36 and 37, 61 and 62 or the use phthalocyanine and naphthocyanine dyes to dye the suspension medium as required by instant Claim 54.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the m and q values of Chiang through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Further, It would have been obvious to one of ordinary skill in the art at the time the invention was made to dye the suspension medium as required by instant Claim 54 as it is well known in the art to choose particles and a suspension medium which have an optical contrast (Column 1, lines 8-18) and naptho- and phthalocyanines are notoriously well known in the art as dyes and does not patentably distinguish the claim over the prior art.

Allowable Subject Matter

11. Claims 6-10, 28 and 29, 52 and 53 contain allowable subject matter.

12. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach nor reasonably suggest binding a threshold promoter to electrode surfaces or electrode protection layers or the use of pyridinium salts or halogenated polymeric or oligomeric pyridinium salts as threshold promoters.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The references are considered cumulative to or less material than those discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JT
Jaison Thomas
Examiner
5/17/2006

Mark Kopec
Primary Examiner